KEESLER AFB, MS
UTILITY SYSTEM DESCRIPTIONS

General: Keesler Air Force Base is located in Biloxi, Mississippi, approximately midway between Mobile, AL and New Orleans, LA. The installation is on a narrow peninsula running west to east, with the Back Bay of Biloxi to the north and the Mississippi Sound, part of the Gulf of Mexico, to the south. US Highway 90 parallels the base's southern border and provides access via US Highways 49 and 110 to Interstate 10. Keesler's Small Arms Range, Camp Keller, is located within the Desoto National Forest approximately 10 air miles northwest of the main base; it contains 1886 acres. The main base size is about 1668 acres. This includes 1370 buildings and 1953 family housing units.

System Descriptions: The following is provided only to give an approximation of the size, scope and general description of the system(s). Any numbers should only be used for estimating purposes. The following system parameters are approximations:

Electrical Distribution: It is a 23-kV distribution system with 3 incoming feeds. One substation (1-5 MVA 23kV to 13.8 kV) serves the west family housing areas and one (2-7.5 MVA 23kV to 4.1 kV) serves the installation hospital. Peak demand is 32,997 kVA (89% power factor) and the annual consumption is approximately 165,950 MWh. The primary distribution system consists of 132.5 miles split evenly between overhead and underground. The secondary distribution system consists of 111 miles, 85% overhead and 15% underground. A construction project is in progress to put both systems completely underground. There are approximately 3000 street and area lights. The system is 20% residential and 80% commercial/industrial.

Natural Gas Distribution: The system consists of 386,000 LF of primarily steel pipe (90% steel, 10% PPE) ranging in size from 8" to 1". The system is in good condition; roughly 90% of the pipe is over 40 years old. Gas is supplied at 125 psig and regulated (via 5 government owned regulators) to facilities at 25 psig. Annual consumption is 460,440 MCF. The system includes nine government owned meter facilities.

Potable Water Distribution: The water system includes 12 wells (6 currently in service), and 6 elevated storage tanks with a capacity of 400,000 gallons each. Pumping capacities range from 500 to 1000 gpm, with pump motors ranging from 60 to 125 horsepower. There are 95 miles of 2" to 10" pipe and additional small service lines. Average water usage: 3 million gpd. Chlorination and fluoridation treatment are provided at the main base wells. Two independent systems provide irrigation water for the golf course. One is from a pond maintained by storm water runoff and base supply wells and the other is tied directly to the base waster distribution system. A small well (no treatment) and hydropneumatic tank serve the off-base Small Arms Range (Camp Keller).

Sanitary Wastewater Collection: The system consists of 445,400 LF of pipe and 10 lift stations containing a total of 20 pumps. It is evenly split between gravity flow and force mains. Pipe sizes range from 4" to 24" and the materials are primarily cast iron and vitrified clay. Pipe ages range from 1 to 58 years. The main lift station received new pumps in March 1999, and the remainder have been replaced within the last 10 years. An 18" force main carries over 90% of the base effluent to the West Biloxi Treatment facility, while the remainder from half of the Harrison Court Housing area is discharged to the Keegan Bayou Plant via a 6" gravity main. The average annual quantity of effluent from the base is 689 million gallons.

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